

Integration of livestock with crops in response to increasing population pressure on available resources.

Keywords: Resources — Integration — Livestock — Crops.

The seminar, organized in Mauritius jointly by the local Ministry of Agriculture and the C.T.A. from 11 to 14 July 1989, has been focused on the use of more adapted knowledges for livestock production improvement in developing countries. Representatives of 15 A.C.P. countries were present together with many scientists. The proceedings (in English and in French) of the seminar will be made available shortly at the following address:

C.T.A. (Technical Centre for Agricultural and Rural Co-operation), Postbus 380 - NL - 6700 AJ Wageningen - Netherlands.

Invited papers were the following:

A. PRELIMINARY PRESENTATIONS

1. The need to match production systems with available resources (Preston, Colombia).
2. The impact of research on livestock development in Mauritius with special reference to utilisation of local products and by-products (Hulman, Mauritius).
3. The role of the Government and of the Private sector in livestock development in Mauritius (Patureau, Mauritius).

B. PRINCIPLES OF LIVESTOCK PRODUCTION

1. Feed resources (Leng, Australia).
2. Sustainable genetic improvement (Vaccaro, Venezuela).
3. Constraints to livestock production due to disease (Provost, France).
4. Micro-livestock (Hardouin, Belgium).

C. THE STATE OF THE ART; FEED RESOURCES

1. Feeding systems based on sugar cane (Figueroa, Cuba).
2. Feeding systems based on crop residues and agricultural by-products (Sansoucy, FAO Roma, Italy).
3. Forage trees and shrubs as feed supplements (Attah Kran, Nigeria).

D. TRANSFER OF TECHNOLOGIES

1. Implementation of appropriate technologies on farm (Dolberg, Denmark).
2. The role of the private sector in technology transfer: a

case study in Colombia (Preston, Colombia).

3. The role of capital, land and labour in livestock development (Speedy, United Kingdom).

Main new recommendations arising from the seminar are the following:

- a) From the representatives of the ACP countries: feed requirements standards from industrialized countries should not be adopted; use of local resources should be emphasized, accountable organisation for marketing should be encouraged as well as feeder roads, environment should deserve more consideration in the development process, ...
- b) In the field of feed resources: emphasis must be placed on developing management systems which optimise their efficient use, strategic supplements (like sugar cane juice for monogastrics and bypass proteins for ruminants) must be supported, pasture improvement through tropical forage legumes should be de-emphasized but legume trees should be integrated in the production systems, research must be stimulated to replace fossil fuel with fuel derived from renewable resources,...
- c) In the field of animal resources: sustainable livestock development requires integration with crop production, inter-disciplinary actions, use of lesserknown potentially valuable species (wildlife, microlivestock, ...) emphasis on management rather than on high technologies, clear formulation of national policies and priorities, better North-South collaboration but also aggressive effort to uniform the international public opinion that «aid» cannot continue to be based on the commercial and political interests of the «donors»,...
- d) In the field of transfer of technologies: better communication at all levels should receive more interest, training must be highly appropriate and preferably within the same ecological zone (M.Sc.) or on split basis (Ph.D.), scientists should undertake more on-farm research, research on problems topics identified by the producers need priority versus experiments of academic interest, innovative approaches (credit to landless workers, marketing,...) should never be omitted, better use of aid resources will be achieved by S-S-S i.e. starting slowly on small scale,...